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EXAMINER

KNABLE, GEOFFREY L

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1733

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/479,648
Filing Date: January 07, 2000
Appellant(s): STEELMAN ET AL.

MAILED
JUL 13 2004
GROUP 1700

Kevin W. Raasch
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 23, 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct but incomplete. In particular, the definition of "Heat Neutral Pressure Source" is important in understanding the claimed invention, this definition being provided at page 5, lines 17-21 of the specification.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 29-31, 34-36, 38-40 and 57-61 stand or fall together. However, each of the five separate rejection paragraphs (one under 35 USC 112, the other four under prior art) is separately argued by appellants (although for the groupings including plural claims, there are no arguments urging separate patentability for claims within such groupings).

Therefore, it will be assumed that the claims in the various groupings corresponding to each of the rejection paragraphs represent separate groupings that do not stand or fall together, reasons being provided as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

US 5,800,919	Peacock et al.	9-1998
US 3,861,988	Preisler	1-1975
US 754,403	Coe	3-1904
US 1,672,093	Sadtler	6-1928
US 1,895,045	Moore	1-1933
US 4,261,783	Finke	4-1981
US 3,962,016	Alfter et al.	6-1976
US 4,511,425	Boyd et al.	4-1985
US 3,853,669	Werstlein	12-1974

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 29-31, 34-36, 38-40 and 57-61 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

All of the claims require in some form a "Heat Neutral Pressure Source". The original disclosure provided what was considered a sufficiently clear, deliberate and unambiguous special definition for "Heat Neutral Pressure Source" – namely the paragraph at page 5, lines 17-21 which clearly indicates that

"For purposes of this invention, a "Heat Neutral Pressure Source" is a pressure source that has thermal conductivity characteristics and surface characteristics at the point of contact to the film such that the film, when nearly melted, will not adhere to the Heat Neutral Pressure Source during application in accordance with the method of the present invention to a surface."

This was the definition that was given to this phrase in interpreting the claims¹. In other words, if a pressure source does not adhere to the heat softened film at the point of contact, it was considered be a "Heat Neutral Pressure Source" (and thus would have the necessary thermal and surface characteristics). In the July 2, 2003 response, however, the arguments presented by appellants over the prior art centered on features described in the specification in subsequent paragraphs of the specification (particularly page 5, lines 22+). In particular, at page 3, lines 4+ of the July 2, 2003 response, it was explicitly argued that:

"There is, however, no teaching in Peacock et al. that the composition of the film-contacting portion of the rivet brush does not appreciably conduct

¹ Note also, as set forth in the last two office actions, that although there is mention in this definition of the pressure source not adhering to the film "when nearly melted", when read in light of the specification as a whole, this was read as requiring no adherence to a "softened" film, it being noted that the specification indicates that heating to the softening point is heating "in accordance with the method of the present invention" – e.g. page 2, lines 25-30. Further, it was noted that there was considered insufficient detail provided in the original disclosure to limit the state of the film to anything beyond simply heat softened. *Importantly, appellants did not and have not specifically challenged this interpretation.*

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heat either to or from the surface of the film as the film is applied under pressure to a surface on a substrate, preferably having a Thermal conductivity of less than 1.8 BTU/hr-in-ft²-°F, which is one of the characteristics of a Heat Neutral Pressure Source of the present invention (specification, page 5, lines 22-28)."

and at page 4, lines 5-7 of the same response, it was argued that:

"the characteristic of not sticking to a softened film is not the exclusive characteristic of the Heat Neutral Pressure Source of claims 30-31, 34, 35, 40, 58, and 61."

Thus, it was urged (and again seems to be urged in appellants' brief – note esp. page 9, lines 1-3 and 12+ as well as pages 23-24 of appellants' brief) that the definition of "Heat Neutral Pressure Source" must also include the specific and further requirements described in the specification with respect to what are "suitable thermal conductivity characteristics and surface characteristics." These features however were not considered to be clearly described as part of the above noted clear, deliberate definition of the "Heat Neutral Pressure Source" in the original disclosure and thus were not considered by the examiner to further limit the claims. In fact, the methodology for determining what is a "Heat Neutral Pressure Source" described at page 6, lines 8-16 of the specification would seem more consistent with the examiner's interpretation of the definition than appellants' above noted statement that "the characteristic of not sticking to a softened film is not the exclusive characteristic of the Heat Neutral Pressure Source." Therefore, since there is now apparently explicit and significant contradiction/confusion in the definition for the "Heat Neutral Pressure Source," a new ambiguity was presented by appellants' response, which ambiguity remains after appellants' brief, it being further

stressed that appellants have not in any way specifically urged that there was any error in the prior arguments and in fact again seem to maintain the positions taken in the July 2, 2003 response. Thus, in light of this contradiction/confusion, the scope of the "Heat Neutral Pressure Source" cannot be readily ascertained and as such, the scope of all the claims is indefinite.

Further, if one reads the parts of the specification urged by appellant into the claims, these parts must also define the invention in reasonably definite terms. It however is not considered that these further definitions are presented in terms that put clear and definite limits on the scope of protection afforded by the claims. For example, a key definition pointed to by appellants with respect to determining what are "suitable thermal conductivity characteristics" includes a requirement that the material "not appreciably conduct heat..." However, the scope of protection afforded by "not appreciably conduct heat" is not clear and definite. In other words, the scope of protection afforded by the requirement for "not appreciably conduct heat" cannot be readily ascertained as one does not know what is and is not "appreciable" conduction.

In summary, the claimed use of the term "Heat Neutral Pressure Source," prior to the July 2, 2003 response, was considered to be adequately clear and definite when read in light of the clear and deliberate definition presented at page 5, lines 17-21 of the specification. The July 2, 2003 response (esp. page 3, lines 4+ and page 4, lines 5-7), as well as the arguments presented at esp. page 9, lines 1-3 and 12+ and pages 23-24 of appellants brief, in urging that additional features are apparently to be read into the claims (these additional features

themselves also being indefinite), now present significant confusion in determining what is meant by "Heat Neutral Pressure Source", the claims therefore being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 29-31, 34-36, 40, 57-59 and 61 stand rejected under 35 U.S.C. 102(a/b/e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the admitted state of the prior art or Peacock et al. (US 5,800,919).

The admitted prior art (mainly described in the background part of the specification but also alluded to later in the detailed description – e.g. page 4, lines 23-32) as well as Peacock et al. (note esp. col. 10, lines 42-50) evidence that it is known to provide a film including pressure sensitive adhesive on one surface as well as to heat this film (e.g. with a heat gun) to soften it and then press it against a substrate (e.g. one having rivets) using a tool such as a squeegee or rivet brush. As to the claim 34 requirement for a "Heat Neutral Pressure Source", although there is some ambiguity in the scope of this term as noted above, as defined in the specification, this term is considered to require nothing more than that the pressure source not adhere to a softened film during application². Although the reference and admitted prior art do not explicitly

² As noted by the examiner in the previous two office actions, although there is mention in the specification of the pressure source not adhering to the film "when nearly melted", when read in light of the specification as a whole, this has been read as requiring no adherence to a "softened" film, it being noted that the specification indicates that heating to the softening point is heating "in accordance with the method of the present invention" – e.g. page 2, lines 25-30. Further, it was noted that there is insufficient detail provided in the original disclosure to limit the state of the film to anything beyond simply heat softened. *Importantly, appellants did not and have not specifically challenged this interpretation.*

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indicate whether the tool sticks to the softened film, it is considered implicit that the conventional (and presumably suitable if not ideal) tool used (e.g. rivet brush or squeegee) would not stick to the softened film as if it did it would obviously not effectively function in the described methods, i.e. in appropriately pressing the film. Note further in fact that page 4, lines 30-32 of the specification, by indicating that "at least a few rivets" are damaged, would seem to indicate that most rivets were not damaged, this seeming to indicate that the rivet brush was in most cases effective and thus unlikely to be sticking to the film. In any event, even if it were not considered implicit, it certainly would have been obvious for the artisan to select and utilize a tool to press the softened film that does not also stick to the softened film during pressing for the obvious and readily apparent advantage of avoiding film damage as well as tool fouling during the application process – only the expected results would therefore be achieved. In other words, that softened plastic films would in many cases present increasing sticking problems with increasing temperatures is not considered to have been a discovery beyond the skill level, and in fact not beyond the normal everyday experience of the ordinary artisan applying these films (note also page 1, lines 28-29 of the specification seems to support this understanding), and further the solution thereof – to adapt the process, materials and press means to minimize or prevent sticking seems to have been obvious and readily apparent – thus, since the claims in essence have been read as simply defining using a tool that does not stick, this is not considered to have represented an unobvious expedient even if not considered to have been anticipated.

Such therefore is considered to anticipate or render obvious what is required by claims 30, 31, 34, 35, 40, 58 and 61. The claim 29 method is further considered to be the implicit or certainly obvious method of performing the known process. As to the thermal conductivity defined in claim 57, it is again submitted that although the prior art rivet brushes were not characterized in terms of conductivity, since a brush is clearly and necessarily inclusive of significant air gaps between bristles, such substantial air gaps would reasonably be expected to provide a relatively low thermal conductivity sufficient to teach or render obvious values as claimed, the burden properly shifting to appellant to establish otherwise. In other words, as is well known to the ordinary artisan, entrapped air is considered to be a very effective insulator and would be expected to significantly reduce the thermal conductivity of a brush and appellant has not conclusively or clearly established to the contrary.

As to claims 36 and 59, the admitted prior art indicates that the conventional application includes use of a heat source, usually as a hot air gun or a torch. It would seem that a torch would satisfy the claimed requirement for infrared radiation. In any event, infrared heating is taken to be extremely well known per se (appellant has not challenged this statement) and therefore obvious.

Claims 38 and 57-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art or Peacock et al. (US 5,800,919) as applied above, and further in view of Preisler (US 3,861,988) and/or Coe (US 754,403) and/or Sadtler (US 1,672,093).

The known process of pressing is effected with a tool such as a squeegee or rivet brush but an open cell foam as claimed is not suggested. It however is submitted that in pressing a film type material to an irregular or textured surface, it is well known and conventional to use a flexible sponge or foam pressing element in order to effect the necessary adaptation of the film to the irregular substrate surface - Preisler (note esp. "16" and col. 2, lines 55-59), Coe (note esp. page 1, lines 8-25) and Sadtler (note esp. "7" and page 2, lines 87-92) are exemplary. To alternatively utilize a sponge or foam type pressing device as the tool to press the film to the surface would thus have been obvious and lead to only the expected results. Further, it is considered that the ordinary artisan would have certainly recognized that the film should not stick to the pressing means during application and would have selected the pressing elements accordingly, it not being beyond the skill of the ordinary artisan to select materials that have well known low adhesion properties (i.e. suitable material properties (i.e. flexible sponge/foam type materials) have been extremely well characterized and it is submitted that the ordinary artisan would be expected to be well aware of material properties including adhesion characteristics and would have been able to select accordingly). The claims directed to the requirement for a low thermal conductivity for the pressing means have also been included within this grounds of rejection as it is considered that foam or sponge type pressing means, which as noted, are considered to have been obvious alternatives in the prior art process, would be expected to exhibit low thermal conductivity characteristics.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art or Peacock et al. (US 5,800,919) as applied above, and further in view of Moore (US 1,895,045) and/or Finke (US 4,261,783).

In the admitted prior art process, the pressing is apparently not effected with a roller. It however is taken by the examiner to be *extremely* well known per se to use rollers to apply pressure to effect bonding to a surface (appellants have not specifically challenged this statement). Further, it is also known and conventional, when desiring to effect adherence to a textured or irregular surface, to apply the pressure using a roller that includes a flexible or conformable surface – Moore (note esp. “8”) and Finke (note esp. roller “201”) are exemplary. It therefore is submitted that it would have been prima facie obvious to effect the desired or necessary adherence of a film to a substrate using a roller for only the expected results. Further, it is again noted that it is considered that the ordinary artisan would have certainly recognized that the film should not stick to the pressing means during application and would have selected the pressing elements accordingly, it not being beyond the skill of the ordinary artisan to select materials (e.g. silicone based or Teflon coated) that have *well known* low adhesion properties.

Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Aifter et al. (US 3,962,016) or Boyd et al. (US 4,511,425) or Werstlein (US 3,853,669).

Alfter et al. discloses a device for application of films to a surface including a pressure roller "6" coated with Teflon as well as a heat source "7". Such is considered to be clearly capable of applying heat to a film as claimed and further the Teflon coated pressure roller would be expected to avoid adherence. The reference to a "kit" is considered to require that the elements have a degree of association such that they are intended to be used together, this thus not considered to define or require any additional structure beyond that shown in the reference. It should also be noted that since claim 30 requires no particular film, while sticking depends in part on the type of film applied, it is considered that almost any pressure source can read on the claimed "Heat Neutral Pressure Source" as there is almost necessarily some types of films (e.g. Teflon) for which the pressure source would have the *capability* of not sticking to.

Boyd et al.³ discloses a device for application of films to a surface including a resilient pressure pad (60) formed of a silicone elastomer adapted to release a softened film as well as various heat sources both within the pad as well as at e.g. "45". Such is considered to be clearly capable of applying heat to a film as claimed and further the pressure pad is designed to release the heated film upon application to a substrate. The reference to a "kit" is considered to require that the elements have a degree of association such that they are intended to be used together, this thus not considered to define or require any

³ It is noted again for the record that since this reference is apparently directed to applying a label to a substrate that is apparently only adhesive when in the heated state, it has been considered that this reference is *not* suggesting application of a label having a *pressure sensitive adhesive* as defined or required in the other claims of record. This reference has therefore not been applied against the other claims in light of this distinction.

additional structure beyond that shown in the reference. It should also again be noted that since claim 30 requires no particular film, while sticking depends in part on the type of film applied, it is considered that almost any pressure source can read on the claimed "Heat Neutral Pressure Source" as there is almost necessarily some types of films (e.g. Teflon) for which the pressure source would have the *capability* of not sticking to.

Werstein also discloses a device for pressing plastic material including heating means and a pressure roller that applies a softened film to the substrate, it being considered that the reference suggestion of a smooth seam would have been understood by the artisan as an indication that the film is not sticking to the roller. In any event, it should also be noted that since claim 30 requires no particular film, while sticking depends in part on the type of film applied, it is considered that almost any pressure source can read on the claimed "Heat Neutral Pressure Source" as there is almost necessarily some types of films (e.g. Teflon) for which the pressure source would have the *capability* of not sticking to.

(11) Response to Argument

With respect to the 35 USC 112 rejection, appellants have argued that the specification is simply providing guidance to one having ordinary skill in the art to understand the scope of the invention and that the examiner has not identified any ambiguity created by providing further description of what are considered suitable "surface characteristics" and "thermal conductivity characteristics" "which, together, provide a Heat Neutral Pressure Source of the present invention" (top of page 9 of appellants' brief). Further specifics in this regard are

provided at page 9, lines 12+ as well as similar arguments at pages 23-24 of appellants' brief. In response to these arguments (and in part because of these arguments), it remains unclear if these further descriptions of what are considered suitable surface characteristics and suitable thermal conductivity characteristics are required features of the special definition for the "Heat Neutral Pressure Source". This alone provides a clear ambiguity. Further, as noted more fully in the statement of rejection, these further descriptions are themselves indefinite and if part of the claimed definition, create further ambiguity. Finally, note again that appellant has specifically argued that these further descriptions are what in part define over the applied prior art (note esp. the quoted parts in the statement of rejection above from the July 2, 2003 response). However, without knowing the scope of these additional requirements, the entire scope of the claims vis-à-vis the prior art is indefinite and confusing.

As to the prior art rejection over the admitted prior art or Peacock et al., it is argued that Peacock et al. "fails to teach the Heat Neutral Pressure Source of the present invention". Without some indication of why appellant believes that this does not read on a "Heat Neutral Pressure Source", this argument is difficult to respond to - reference is made to the statement of rejection for the examiner's position in this regard. It is also argued that "[f]urthermore, there is no teaching in Peacock et al. that the rivet brush does not stick to or damage the heated film". Again, however, it is considered implicit that the conventional (and presumably suitable if not ideal) tool used (e.g. the conventionally used rivet brush or squeegee) would not stick to the softened film as if it did it would obviously not

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effectively function in the described methods, i.e. in appropriately pressing the film. Further, although Peacock et al. is referring to a rivet brush as used in tests, this is simply considered to be a reflection of the fact that this apparently represents the well known way these films are commonly applied to rivets on truck sides. If this damaged the film, it certainly is unlikely it would be used. While it might not be the ideal or fastest tool, it is still not seen how the present claims define over this. Note further in fact that page 4, lines 30-32 of the specification, by indicating that "at least a few rivets" are damaged, would seem to indicate that most rivets were not damaged, this seeming to indicate that a rivet brush was in most cases effective and thus unlikely to be sticking to the film. In any event, even if it were not considered implicit, it certainly would have been obvious for the artisan to select and utilize a tool to press the softened film that does not also stick to the softened film during pressing for the obvious and readily apparent advantage of avoiding film damage as well as tool fouling during the application process – only the expected results would therefore be achieved. In other words, that softened plastic films would in many cases present increasing sticking problems with increasing temperatures is not considered to have been a discovery beyond the skill level, and in fact not beyond the normal everyday experience of the ordinary artisan applying these films, and further the solution thereof – to adapt the process, materials and press means to minimize or prevent sticking seems to have been obvious and readily apparent – thus, since the claims in essence have been read as simply defining using a tool that

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does not stick, this is not considered to have represented an unobvious expedient even if not considered to have been anticipated.

With respect to the 35 USC 103 rejection of claims 38 and 57-61, it is urged that Preisler fails to suggest using heat and thus motivation to make the combination as well as a reasonable expectation of success is lacking. Likewise, with respect to Coe and Sadtler, it is urged that pressure sensitive films and heat are not taught and thus there would be no motivation or reasonable expectation of success. These arguments have been carefully considered but it is still considered that taken as a whole the secondary references evidence and establish that in the art of pressing a film type material (including pressure sensitive films as in Preisler) to an irregular or textured surface, it is a well known and conventional expedient to use a flexible sponge or foam pressing element in order to effect the necessary adaptation of the film to the irregular substrate surface. Further, it is submitted that these teachings would have been understood by the artisan as instructive and applicable regardless of the preliminary processing (e.g. heat) required to allow the film to conform. In other words, it is submitted once the ordinary artisan is taught that foam/sponge pressing means are suitable and effective to press films to irregular surfaces, they would have found it obvious to utilize a foam/sponge type pressing means anywhere a film is to be pressed to an irregular substrate. Again, the preliminary film processing necessary to allow any particular film material to conform does not fundamentally alter the basic teachings/evidence of these secondary references with respect to the known use of foam/sponge pressing means as

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suitable and effective means to press films to irregular surfaces. There is no fundamental incompatibility between pressing an unheated film and a heated one – again, while sticking might be a concern, such is considered to be entirely expected and it is not beyond the skill level of the artisan to assure that materials are used that are low adhesion, such being extremely well known and characterized in the material arts.

It is noted that appellants also point out at page 18, lines 10+ of their brief that “the use of Appellants’ Heat Neutral Pressure Source” avoids the necessity of selecting a low adhesion material” – however, nothing in the present claims (or what is considered the definition for a “Heat Neutral Pressure Source”) is considered to define or require in any way that the material is not a low adhesion material. Further, although it is stated that sticking is not a recognized problem, it again is submitted that it is not unreasonable to expect it to not be beyond the normal everyday experience of the ordinary artisan applying these films that heat softened films become more sticky – in fact, page 1, lines 28-29 would seem to be an acknowledgment that the films are known to be sticky and the artisan therefore waits for the film to cool somewhat before pressing with the e.g. brush.

As to the rejection of claim 39, it is argued that Moore is non-analogous and Finke fails to suggest an adhesive coated film, etc. These arguments have been considered but first, it should be noted that the rejection was at first predicated on what was considered to be the *extremely* well known expedient per se of using rollers to apply pressure to effect bonding to a surface (e.g. wall paper rolling; rolling vinyl floors, etc.), this not being expressly challenged by

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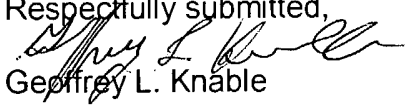
appellants. The secondary references were added simply to establish that it further is also known and conventional, when desiring to effect adherence to a textured or irregular surface, to apply the pressure using a roller that includes a flexible or conformable surface – Moore (note esp. “8”) and Finke (note esp. roller “201”) being exemplary. Additionally, it should be stressed that the prior art included not only discrete tools such as the rivet brush but also tools (e.g. squeegee) for more continuous or elongated irregularities such as ribs. Use of rollers would have been particularly obvious for such elongated irregularities.

As to the rejections of claim 30, appellant urges in each instance that the references do not suggest a Heat Neutral Pressure Source as this requires that it “not appreciably conduct heat”. As noted above, such is not considered to form part of the definition of the Heat Neutral Pressure Source as such is not defined in the specification in a precise definite manner as being intended to also limit the meaning of the phrase. In other words, the original definition is considered to be restricted to page 5, lines 17-21. Further, the methodology for determining what is a “Heat Neutral Pressure Source” described at page 6, lines 8-16 of the specification would seem to simply define that in essence if the material does not stick to a heated film (which in claim 30 can be any film, including those that have very low adhesions properties), it is a Heat Neutral Pressure Source. This methodology does not define or require further inquiry into its heat conductivity or other characteristics. Appellants’ arguments in this regard are therefore unconvincing.

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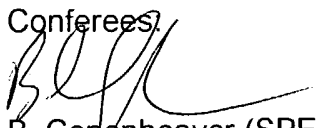
For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,


Geoffrey L. Knable
Primary Examiner
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G. Knable
July 12, 2004

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